UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 December 2003_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-55_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-55_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Detailed Action

Status of claims

1. Claims 1-55 are pending.

2. Claims 1-55 have been examined.

Priority

3.   Applicant does not claim any foreign or domestic priority. Accordingly, the application

has been examined with an effective filing date of December 22, 2003.

Specification

4.   The specification is objected to as failing to provide proper antecedent basis for the

claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the

following is required: Claims 46-55 recite in part a computer product. However, computer

product is not disclosed and defined in the specification.

5.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Objections

6.   Claims 51-55 are objected to for the following informalities. Claims 51 recites that it

depends to claim 41. However, claims 51-55 recite a product. This appears to be a

typographical error. As it seems that claim 51 should be dependent to claim 46. In order to

expedite the prosecution, it will be assumed what was meant was that claim 51 depends to claim

46.

Claim Rejections - 35 USC § 101

7.　　35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8.　　Claims 1-36 and 46-55 are rejected under 35 U.S.C. 101 because the language of the

claims raise a question as to whether the claims are directed merely to an abstract idea that is not

tied to a machine which would result in a practical application to produce a concrete, useful, and

tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

　　　　a.　　Claims 1 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

　　　　　　MPEP 2106.01:

> **The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.**
>
> **Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)**

> **Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").**

Claim 1 recites "a search system". However claim 1 fails to contain any computer hardware that is used to implement the system so as to realize the functionality. Contrary to arguments made by some applicants, use of the word "system" does not inherently means that the claim is directed to a machine. Only if at least one of the claimed elements of the system is a physical part of a device can the system as claimed constitute part of a device or a combination of devices to be a machine within the meaning of 101.

b.   Claims 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 15 fails to fall within a statutory category of invention. It is directed to the program itself, not a process occurring as a result of executing the program, a machine programmed to operate in accordance with the program nor a manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its functionality. It's also clearly not directed to a composition of matter.

c.   Claims 22 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 22 fails to fall within a statutory category of invention. It is directed to the program itself, not a process occurring as a result of executing the

program, a machine programmed to operate in accordance with the program nor a manufacture

structurally and functionally interconnected with the program in a manner which enables the

program to act as a computer component and realize its functionality. It's also clearly not

directed to a composition of matter.

       d.   Claims 29 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

       MPEP 2106.01:

> **The claims lack the necessary physical articles or objects to constitute a
> machine or a manufacture within the meaning of 35 USC 101. They are clearly not a
> series of steps or acts to be a process nor are they a combination of chemical
> compounds to be a composition of matter. As such, they fail to fall within a statutory
> category. They are, at best, functional descriptive material *per se.***
>
> **Descriptive material can be characterized as either "functional descriptive
> material" or "nonfunctional descriptive material." Both types of "descriptive
> material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at
> 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some
> computer-readable medium, it becomes structurally and functionally interrelated to
> the medium and will be statutory in most cases since use of technology permits the
> function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d
> 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)**
>
> **Merely claiming nonfunctional descriptive material, i.e., abstract ideas,
> stored on a computer-readable medium, in a computer, or on an electromagnetic
> carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ
> at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as
> abstract ideas because "[t]he sole practical application of the algorithm was in
> connection with the programming of a general purpose computer.").**

       Claim 29 recites "a search system". However claim 29 fails to contain any

computer hardware that is used to implement the system so as to realize the functionality.

Contrary to arguments made by some applicants, use of the word "system" does not

inherently means that the claim is directed to a machine. Only if at least one of the

claimed elements of the system is a physical part of a device can the system as claimed

constitute part of a device or a combination of devices to be a machine within the

meaning of 101.

d.   Claims 46 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

The claim fails to place the invention squarely within one statutory class of

invention.   The broadest reasonable interpretation of "computer product readable by a

machine" would be fairly conveyed to one of ordinary skill in the art as a computer

program. Claim 46 therefore fails to fall within a statutory category of invention. It is

directed to the program itself, not a process occurring as a result of executing the

program, a machine programmed to operate in accordance with the program nor a

manufacture structurally and functionally interconnected with the program in a manner

which enables the program to act as a computer component and realize its functionality.

It's also clearly not directed to a composition of matter.

All other claims fail to resolve the deficiencies of claims from which they depend from, and are

therefore further rejected.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10.   Claims 1, 10-11, 13-14, 22-24, 27, 29, 37, and 46 are rejected under 35 U.S.C. 102(b) as being anticpated by U.S. Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph).

<u>Claim 1:</u>

Prokoph discloses the following claimed limitations:

"a search engine to search through an index of documents; and" [0028 lines 13-17, search service 100 by the client 101 the search query is used to search the index 107 and a list of search hits 110 is returned to the client. Accordingly, a search engine to search (search service 100) through an index of documents (index 107)]

"an index enhancer to enhance said index with at least some user queries." [figure 2 elements 206-208, 212, and 200. 0073, indexer 206 then picks up the document extracts and indexes them, via step 350. The index is then stored in the search index for use by the search engine. Accordingly, an index enhancer to enhance (206, adds more indexes) said index (207) with at least some user queries (212, 200, 208, allows the client to issue search queries)]

<u>Claim 10:</u>

Prokoph discloses "wherein said index enhancer comprises a query ranker to rank queries associated to documents" [0049 lines 5-6, keywords occurring within the documents may be extracted based on word ranking approaches. Accordingly wherein said index enhancer (206)

comprises a query ranker (ranking) to rank (rank) queries (keywords) associated to documents

(documents) is suggested]

Claim 11:

Prokoph discloses "wherein said query ranker comprises means to rank said queries according to

frequency of usage." [0053, score of a word consists of the salience measure if this is greater

than a threshold set in the configuration file. The default salience measure can be calculated by

multiplying text frequency with inverse document frequency.]

Claim 13:

Prokoph discloses "wherein said index enhancer comprises an index updater to enhance said

index with at least some of said ranked queries." [figure 2 elements 206-208, 212, and 200.

0073, indexer 206 then picks up the document extracts and indexes them, via step 350. The

index is then stored in the search index for use by the search engine. 0049 lines 5-6, keywords

occurring within the documents may be extracted based on word ranking approaches.

Accordingly, index enhancer comprises an index updater (206, adds more indexes) to enhance

said index (207) with at least some of the ranked queries user queries (keywords)]

Claim 14:

Prokoph discloses "wherein said index updater comprises means to filter out lowly ranked

queries" [0049-0052].

Claim 22:

Prokoph discloses the following claimed limitations:

"a listing of terms found in user queries; and" [abstract lines 6-7, document extract

comprises a portion of the document. abstract lines 9-10, search index to retrieve information

satisfying a search query. 0007 lines 20-22, the information available in the index is exploited

by later search queries to match search queries against the collection of indexed documents.

Accordingly, a listing of terms found in user queries used to find said documents (abstract lines

9-10, search index to retrieve information satisfying a search query. 0007, information available

in the index is exploited by later search queries to match search queries against the collection of

indexed documents.)]

"a listing of documents said terms were used to retrieve." . [0007, information available

in the index is exploited by later search queries to match search queries against the collection of

indexed documents. Accordingly, a listing of documents said terms were used to retrieve

(indexed documents)]

Claim 23:

Prokoph discloses "wherein said user queries comprise a portion of the queries used in a session

to find a selected document." [figure 2 element 208]

Claim 24:

Prokoph discloses "wherein said user queries comprise the first query of a session to find a

selected document." [figure 2 element 208]

Claim 27:

Prokoph discloses "wherein documents associated with a query comprise the higher ranked documents produced from a query." [0078 lines 3-6, returning relevant documents, relevancy displayed by rank order of the result list and optionally rank scores per document for which presumably the first document in the list is the best match for the query.]

Claim 29:

Prokoph discloses the following claimed limitations:

"a search client to issue user queries; and" [0028 lines 13-17, figure 1 elements 100-109. Accordingly, a search client (figure 1, element 101) to issue user queries (figure 1 element 100).]

"a search engine to search through an index of documents, wherein said index indexes at least an original text and at least one query describing something about said original text"[0028 lines 14-17, search service. 0007 line 8, fulltext index. 0007 lines 21-22, index is exploited by later search queries to match search queries against the collection of indexed documents. and abstract, search engine accesses the search index to retrieve information satisfying the query. Accordingly, a search engine to search through an index of documents (search service, figure 1 element 100), wherein said index indexes at least an original text (0007 line 8, fulltext index) and at least one query describing something about said original text (0007, match search queries).]

Claim 37:

Prokoph discloses the following claimed limitations:

"enhancing an index of documents with at least some user queries." [figure 2 elements 206-208, 212, and 200. 0073, indexer 206 then picks up the document extracts and indexes them, via step 350. The index is then stored in the search index for use by the search engine. Accordingly, enhancing (206, adds more indexes) an index (207) with at least some user queries (212, 200, 208, allows the client to issue search queries)]

Claim 46:

Prokoph discloses the following claimed limitations "enhancing an index of documents with at least some user queries" [figure 2 elements 206-208, 212, and 200. 0073, indexer 206 then picks up the document extracts and indexes them, via step 350. The index is then stored in the search index for use by the search engine. Accordingly, enhancing (206, adds more indexes) an index (207) with at least some user queries (212, 200, 208, allows the client to issue search queries)]

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12.   **Claims 2-5, 8, 38-42, 44-45, and 47-48, 50-52, and 54-55 are rejected under 35**

U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0091671

by Prokoph (hereafter Prokoph) further in view of U.S. Patent 6338056 by Dessloch et. al.

(hereafter Dessloch).

<u>**Claim 2:**</u>

Prokoph does not explicitly disclose "said index enhancer comprises a query processor to

associate queries with documents retrieved by said search engine."

On the other hand, Dessloch discloses figure 2 element 108 a database engine. Further

disclosing figure 2 element 208 queries and figure 2 element 112 and 114, index retrieved by

external search engine. Accordingly, said index enhancer comprises a query processor (figure 2

element 108, database engine) to associate queries (figure 2 element 208) with documents

retrieved by said search engine (index retrieved by search engine) is suggested.

Both Prokoph and Dessloch are directed towards search systems, they are therefore within the

same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at

the time the invention was made to have applied the disclosure of Dessloch above to the

disclosure of Prokoph for the purpose of extending an index such that it exploits the search

capabilities of content-specific search engines.

<u>**Claim 3:**</u>

The combination of Prokoph and Dessloch disclose in Dessloch

"wherein said query processor comprises means to determine which of said retrieved documents

to associate with said queries and means to determine which queries to associate with said

retrieved documents" [col. 11 lines 66-67 to col. 12 line 1, that fig. 2 illustrates some of the

components of the database engine 108 and describes how they could be extended to exploit an

external search engine 112. Dessloch further discloses col. 12 lines 20-26, after the table index

are created, the predicate specification of a query 208 is analyzed in an optimizer 210 to

determine whether the index 202 can be exploited in performing the query 208. If so, a range

producing function 212 is invoked to produce start and stop key values from the external index

114, which are then used for an index scan operation against the b-tree index 202. Accordingly,

wherein said query processor (database engine) comprises means to determine which of said

retrieved documents (index 114) to associate with said queries (query 208) and means to

determine which queries (query 208) to associate with said retrieved documents (index 114) is

suggested.]

Claim 4:

The combination of Prokoph and Dessloch discloses in Dessloch "wherein said associated

queries comprise a portion of the queries used in a session." [figure 2 element 208]

Claim 5:

The combination of Prokoph and Dessloch discloses in Dessloch "wherein said associated

queries comprise the first query of a session" [figure 2 element 208]

Claim 8:

The combination of Prokoph and Dessloch discloses in Prokoph, "wherein said determined retrieved documents comprise the higher ranked documents produced from a query."[0078 lines 3-6, returning relevant documents, relevancy displayed by rank order of the result list and optionally rank scores per document for which presumably the first document in the list is the best match for the query.]

Claim 38:

Prokoph does not explicitly disclose "wherein said enhancing comprises associating queries with documents retrieved by a search engine."

On the other hand, Dessloch discloses figure 2 element 108 a database engine. Further disclosing figure 2 element 208 queries and figure 2 element 112 and 114, index retrieved by external search engine. Accordingly, said enhancing comprises associating queries (figure 2 element 208) with documents retrieved by said search engine (index retrieved by search engine) is suggested.

Both Prokoph and Dessloch are directed towards search systems, they are therefore within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied the disclosure of Dessloch above to the disclosure of Prokoph for the purpose of extending an index such that it exploits the search capabilities of content-specific search engines.

Claim 39:

The combination of Prokoph and Dessloch disclose in Dessloch

"wherein said enhancing comprises determining which of said retrieved documents to associate

with said queries and determining which queries to associate with said retrieved documents"

[col. 11 lines 66-67 to col. 12 line 1, that fig. 2 illustrates some of the components of the

database engine 108 and describes how they could be extended to exploit an external search

engine 112. Dessloch further discloses col. 12 lines 20-26, after the table index are created, the

predicate specification of a query 208 is analyzed in an optimizer 210 to determine whether the

index 202 can be exploited in performing the query 208. If so, a range producing function 212 is

invoked to produce start and stop key values from the external index 114, which are then used

for an index scan operation against the b-tree index 202. Accordingly, wherein said enhancing

comprises determining which of said retrieved documents (index 114) to associate with said

queries (query 208) and determining which queries (query 208) to associate with said retrieved

documents (index 114) is suggested.]

Claim 40:

The combination of Prokoph and Dessloch disclose in Prokoph "wherein said enhancing

comprises listing a term in a query and the number of times that term is associated with a

document." [abstract lines 6-7, document extract comprises a portion of the document. abstract

lines 9-10, search index to retrieve information satisfying a search query. 0007 lines 20-22, the

information available in the index is exploited by later search queries to match search queries

against the collection of indexed documents. Accordingly, listing of term found in a query

(abstract lines 9-10, search index to retrieve information satisfying a search query.) and the

number of times that term is associated with a document (0012, the number of occurrences of

each search term is determined)]

Claim 41:

The combination of Prokoph and Dessoloch disclose in Prokoph "wherein said enhancing

comprises ranking queries associated to documents." [0049 lines 5-6, keywords occurring within

the documents may be extracted based on word ranking approaches. Accordingly wherein said

enhancing (206) comprises a ranking (ranking) queries (keywords) associated to documents

(documents) is suggested]

Claim 42:

The combination of Prokoph and Dessloch disclose in Prokoph "wherein said ranking comprises

ranking said queries according to frequency of usage." [0053, score of a word consists of the

salience measure if this is greater than a threshold set in the configuration file. The default

salience measure can be calculated by multiplying text frequency with inverse document

frequency.]

Claim 44:

The combination of Prokoph and Dessloch discloses in Prokoph "wherein said enhancing

comprises updating said index with at least some of said ranked queries." [figure 2 elements 206-

208, 212, and 200. 0073, indexer 206 then picks up the document extracts and indexes them, via

step 350. The index is then stored in the search index for use by the search engine. 0049 lines 5-
6, keywords occurring within the documents may be extracted based on word ranking
approaches. Accordingly, index enhancer comprises an index updater (206, adds more indexes)
to enhance said index (207) with at least some of the ranked queries user queries (keywords)]

Claim 45:

The combination of Prokoph and Dessloch discloses in Prokoph "wherein said updating
comprises filtering out lowly ranked queries." [0049-0052].

Claim 47:

Prokoph does not explicitly disclose "wherein said enhancing comprises associating queries with
documents retrieved by a search engine."

On the other hand, Dessloch discloses figure 2 element 108 a database engine. Further
disclosing figure 2 element 208 queries and figure 2 element 112 and 114, index retrieved by
external search engine. Accordingly, said enhancing comprises associating queries (figure 2
element 208) with documents retrieved by said search engine (index retrieved by search engine)
is suggested.

Both Prokoph and Dessloch are directed towards search systems, they are therefore within the
same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at
the time the invention was made to have applied the disclosure of Dessloch above to the

disclosure of Prokoph for the purpose of extending an index such that it exploits the search

capabilities of content-specific search engines.

Claim 48:

The combination of Prokoph and Dessloch disclose in Dessloch

"wherein said enhancing comprises determining which of said retrieved documents to associate

with said queries and determining which queries to associate with said retrieved documents"

[col. 11 lines 66-67 to col. 12 line 1, that fig. 2 illustrates some of the components of the

database engine 108 and describes how they could be extended to exploit an external search

engine 112. Dessloch further discloses col. 12 lines 20-26, after the table index are created, the

predicate specification of a query 208 is analyzed in an optimizer 210 to determine whether the

index 202 can be exploited in performing the query 208. If so, a range producing function 212 is

invoked to produce start and stop key values from the external index 114, which are then used

for an index scan operation against the b-tree index 202. Accordingly, wherein said enhancing

comprises determining which of said retrieved documents (index 114) to associate with said

queries (query 208) and determining which queries (query 208) to associate with said retrieved

documents (index 114) is suggested.]

Claim 50:

The combination of Prokoph and Dessloch disclose in Prokoph "wherein said enhancing

comprises listing a term in a query and the number of times that term is associated with a

document." [abstract lines 6-7, document extract comprises a portion of the document. abstract

lines 9-10, search index to retrieve information satisfying a search query. 0007 lines 20-22, the

information available in the index is exploited by later search queries to match search queries

against the collection of indexed documents. Accordingly, listing of term found in a query

(abstract lines 9-10, search index to retrieve information satisfying a search query.) and the

number of times that term is associated with a document (0012, the number of occurrences of

each search term is determined)]

Claim 51:

The combination of Prokoph and Dessoloch disclose in Prokoph "wherein said enhancing

comprises ranking queries associated to documents." [0049 lines 5-6, keywords occurring within

the documents may be extracted based on word ranking approaches. Accordingly wherein said

enhancing (206) comprises a ranking (ranking) queries (keywords) associated to documents

(documents) is suggested]

Claim 52:

The combination of Prokoph and Dessloch disclose in Prokoph "wherein said ranking comprises

ranking said queries according to frequency of usage." [0053, score of a word consists of the

salience measure if this is greater than a threshold set in the configuration file. The default

salience measure can be calculated by multiplying text frequency with inverse document

frequency.]

Claim 54:

The combination of Prokoph and Dessloch discloses in Prokoph "wherein said enhancing comprises updating said index with at least some of said ranked queries." [figure 2 elements 206-208, 212, and 200. 0073, indexer 206 then picks up the document extracts and indexes them, via step 350. The index is then stored in the search index for use by the search engine. 0049 lines 5-6, keywords occurring within the documents may be extracted based on word ranking approaches. Accordingly, enhancing comprises updating (206, adds more indexes) said index (207) with at least some of the ranked queries (keywords)]

Claim 55:

The combination of Prokoph and Dessloch discloses in Prokoph "wherein said updating comprises filtering out lowly ranked queries." [0049-0052].

13.   Claims 12, 15-17, 20, 30-32, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further in view of U.S. Patent 6169986 by Bowman et. al. (hereafter Bowman).

Claim 12:

Prokoph does not explicitly disclose "wherein said query ranker comprises means to rank said queries according to time of usage."

On the other hand, Bowman discloses a hybrid approach can alternatively be used in which the table is generated from a large number of log files, but in which the most recent log files are

given greater weight. For example, queries submitted during the last week can be counted three times when generating the correlation scores, while queries submitted from one week to one month ago can be counted only once. Accordingly, wherein said query ranker (score) comprises means to rank (weight) said queries according to time of usage (most recent log files are given greater weight).

Both Prokoph and Bowman are directed to search systems and thus within the same field of endeavor. It would have been obvious to a person of an ordinary skill at the time the invention was made to have applied Bowman's disclosure above to Prokoph in order to give more weight to terms that are of recent values thereby showing the current trends and staying up-to-date.

Claim 15:

Prokoph discloses the following claimed limitations:

"a listing of terms found in documents to be indexed and at least in user queries used to find said documents; and" [abstract lines 6-7, document extract comprises a portion of the document. abstract lines 9-10, search index to retrieve information satisfying a search query. 0007 lines 20-22, the information available in the index is exploited by later search queries to match search queries against the collection of indexed documents. Accordingly, a listing of terms found in documents to be indexed (abstract, portions of documents) and at least in user queries used to find said documents (abstract lines 9-10, search index to retrieve information satisfying a search query. 0007, information available in the index is exploited by later search queries to match search queries against the collection of indexed documents.)]

"a listing at least of how frequently such terms occurred in said documents" [0011, take

into account the information available in the search index and the search terms used. for

example the processing can comprise the following steps: for each candidate document the

number of occurrences of each search term is determined. Accordingly, a listing at least of how

frequently (number of occurrences) such terms (search term) occurred in said documents

(document)]

However, Prokoph does not explicitly disclose a list of how frequently such terms

occurred in "user queries."

On the other hand, Bowman discloses a correlation table figure 6 element 137A and

137B and col. 11 lines 62-64 query correlation tables for a composite period by combining the

entries of the daily files for the length of the composite period. Col. 3 line 46, correlation data

that reflects frequencies of occurrences of query terms within the search query. Accordingly,

disclosing index comprising a list of user queries (figure 6 element 137, query correlation table).

Both Prokoph and Bowman are directed to search systems and thus within the same field

of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the

invention was made to have applied the disclosure of Bowman above to the disclosure of

Prokoph for the purpose of providing better search results by finding related search terms, thus

further improving a relevant search.

Claim 16:

The combination of Prokoph and Bowman discloses in Prokoph "wherein said user queries

comprise a portion of the queries used in a session to find a selected document." [figure 2

element 208]

Claim 17:

The combination of Prokoph and Bowman discloses in Prokoph "wherein said user queries

comprise the first query of a session to find a selected document." [figure 2 element 208]

Claim 20:

The combination of Prokoph and Bowman disclose in Prokoph "wherein documents associated

with a query comprise the higher ranked documents produced from a query." [0078 lines 3-6,

returning relevant documents, relevancy displayed by rank order of the result list and optionally

rank scores per document for which presumably the first document in the list is the best match

for the query.]

Claim 30:

Prokoph discloses the following claimed limitations:

"a listing of terms found in documents to be indexed and at least in user queries used to

find said documents; and" [abstract lines 6-7, document extract comprises a portion of the

document. abstract lines 9-10, search index to retrieve information satisfying a search query.

0007 lines 20-22, the information available in the index is exploited by later search queries to

match search queries against the collection of indexed documents. Accordingly, a listing of

terms found in documents to be indexed (abstract, portions of documents) and at least in user

queries used to find said documents (abstract lines 9-10, search index to retrieve information

satisfying a search query. 0007, information available in the index is exploited by later search

queries to match search queries against the collection of indexed documents.)]

"a listing at least of how frequently such terms occurred in said documents" [0011, take

into account the information available in the search index and the search terms used. for

example the processing can comprise the following steps: for each candidate document the

number of occurrences of each search term is determined. Accordingly, a listing at least of how

frequently (number of occurrences) such terms (search term) occurred in said documents

(document)]

However, Prokoph does not explicitly disclose a list of "user queries."

On the other hand, Bowman discloses a correlation table figure 6 element 137A and

137B and col. 11 lines 62-64 query correlation tables for a composite period by combining the

entries of the daily files for the length of the composite period. Col. 3 line 46, correlation data

that reflects frequencies of occurrences of query terms within the search query. Accordingly,

disclosing index comprising a list of user queries (figure 6 element 137, query correlation table).

Both Prokoph and Bowman are directed to search systems and thus within the same field

of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the

invention was made to have applied the disclosure of Bowman above to the disclosure of

Prokoph for the purpose of providing better search results by finding related search terms, thus further improving a relevant search.

Claim 31:

The combination of Prokoph and Bowman disclose in Prokoph "wherein said user queries comprise a portion of the queries used in a session to find a selected document." [figure 2 element 208]

Claim 32:

The combination of Prokoph and Bowman disclose in Prokoph "wherein said user queries comprise the first query of a session to find a selected document. "[figure 2 element 208]

Claim 35:

The combination of Prokoph and Bowman disclose in Prokoph "wherein documents associated with a query comprise the higher ranked documents produced from a query." [0078 lines 3-6, returning relevant documents, relevancy displayed by rank order of the result list and optionally rank scores per document for which presumably the first document in the list is the best match for the query.]

14.   **Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further in view of U.S. Patent 7254580 by Gharachorloo et. al. (hereafter Gharachorloo).**

Claim 25:

Prokoph does not explicitly disclose "wherein a document associated with a query comprises the document selected by said user. "

On the other hand, Gharachorloo discloses a document search system comprising index of documents (col. 2 lines 14-16). Gharachorloo further discloses that the user selects a document for viewing (col. 5 line 23-24). Accordingly, wherein a document associated with a query (document search) comprises the document selected by said user (user selects a document for viewing).

Prokoph and Gharachorloo are all directed towards search systems. Prokoph and Gharachorloo are therefore within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied the disclosure of Gharachorloo to the disclosure of Prokoph for the purpose of allowing the user to obtain a the most relevant of documents.

Claim 26:

Prokoph does not explicitly disclose "wherein a document associated with a query comprises the document browsed to by said user as a result of a query."

On the other hand, Gharachorloo discloses a document search system comprising index of documents (col. 2 lines 14-16). Col. 4 lines 35-40, search queries submitted by users.

Gharachorloo further discloses that the user selects a document for viewing (col. 5 line 23-24).

Accordingly, wherein a document associated with a query (document search) comprises the

document browsed to by said user (document for viewing) as a result of a query (search queries).

Prokoph and Gharachorloo are all directed towards search systems. Prokoph and Gharachorloo

are therefore within the same field of endeavor. It would have been obvious to a person of an

ordinary skill in the art at the time the invention was made to have applied the disclosure of

Gharachorloo to the disclosure of Prokoph for the purpose of allowing the user to obtain a the

most relevant of documents.

15.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further in view of

U.S. Patent Application Publicaiton 20030149687 by Brown et. al. (hereafter Brown).

<u>Claim 28:</u>

Prokoph does not explicitly disclose "wherein said user queries are in a language other than the

language of a selected document."

On the other hand, Brown discloses that keyword search in one of a number of languages and

provide a listing of documents contained in all of those languages. Further disclosing the search

engine containing the table can identify pertinent documents either in a selected language, a

second language or in all supported languages, as determined by user. Accordingly, wherein

said user queries are in a language (keyword search in one of a number of languages) are in a

language other than the language of a selected document (identify a document either in a selected

language, a second language or in all supported languages).

Prokoph and Brown are all directed towards search systems utilizing indexes. They are therefore

within the same field of endeavor. It would have been obvious to a person of an ordinary skill in

the art to have applied Brown's disclosure above to the disclosure of Prokoph for the purpose of

further searching relevant documents of different languages. Thereby extending the search to be

able to obtain more relevant search results in different languages.

16.   Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further in

view of U.S. Patent 6338056 by Dessloch et. al. (hereafter Dessloch) and U.S. Patent

7254580 by Gharachorloo et. al. (hereafter Gharachorloo).

Claim 6:

The combination of Prokoph and Dessloch do not explicitly disclose "wherein said determined

retrieved document comprises the document selected by said user."

On the other hand, Gharachorloo discloses a document search system comprising index of

documents (col. 2 lines 14-16). Gharachorloo further discloses that the user selects a document

for viewing (col. 5 line 23-24). Accordingly, wherein said determined retrieved document

(document search) comprises the document selected by said user (user selects a document for

viewing).

Prokoph, Dessloch, and Gharachorloo are all directed towards search systems, and further search systems utilizing indices. Prokoph, Dessloch, and Gharachorloo are therefore within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied the disclosure of Gharachorloo to the combination of Prokoph and Dessloch for the purpose of allowing the user to obtain a the most relevant of documents.

Claim 7:

The combination of Prokoph and Dessloch do not explicitly disclose "wherein said determined retrieved document comprises the document browsed to by said user as a result of a query."

On the other hand, Gharachorloo discloses a document search system comprising index of documents (col. 2 lines 14-16). Col. 4 lines 35-40, search queries submitted by users. Gharachorloo further discloses that the user selects a document for viewing (col. 5 line 23-24). Accordingly, wherein said determined retrieved document (document search) comprises the document browsed to by said user (document for viewing) as a result of a query (search queries).

Prokoph, Dessloch, and Gharachorloo are all directed towards search systems, and further search systems utilizing indices. Prokoph, Dessloch, and Gharachorloo are therefore within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the

time the invention was made to have applied the disclosure of Gharachorloo to the combination

of Prokoph and Dessloch for the purpose of allowing the user to obtain a the most relevant of

documents.

17.   Claim 9 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further in

view of U.S. Patent 6338056 by Dessloch et. al. (hereafter Dessloch) and U.S. Patent

Application Publicaiton 20030149687 by Brown et. al. (hereafter Brown).

<u>Claim 9:</u>

The combination of Prokoph and Dessloch do not explicitly disclose "wherein said user queries

are in a language other than the language of a selected document."

On the other hand, Brown discloses that keyword search in one of a number of languages and

provide a listing of documents contained in all of those languages. Further disclosing the search

engine containing the table can identify pertinent documents either in a selected language, a

second language or in all supported languages, as determined by user. Accordingly, wherein

said user queries are in a language (keyword search in one of a number of languages) are in a

language other than the language of a selected document (identify a document either in a selected

language, a second language or in all supported languages).

Prokoph, Dessloch, and Brown are all directed towards search systems utilizing indexes. They

are therefore within the same field of endeavor. It would have been obvious to a person of an

ordinary skill in the art to have applied Brown's disclosure above to the combination of Prokoph

and Dessloch for the purpose of further searching relevant documents of different languages.

Thereby extending the search to be able to obtain more relevant search results in different

languages.

Claim 49:

The combination of Prokoph and Dessloch disclose in Prokoph "wherein said enhancing

comprises listing a term in a query" [abstract lines 6-7, document extract comprises a portion of

the document. abstract lines 9-10, search index to retrieve information satisfying a search query.

0007 lines 20-22, the information available in the index is exploited by later search queries to

match search queries against the collection of indexed documents. Accordingly, listing a term in

a query (abstract lines 9-10, search index to retrieve information satisfying a search query.)]

Prokoph and Dessloch do not explicitly disclose "its location in the query."

On the other hand, 0005 of Brown discloses keywords proximity to other keywords.

Accordingly, location in the query (keyword proximity) is disclosed.

Prokoph, Dessloch, and Brown are all directed to search systems and therefore in the same field

of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the

invention was made to have applied Brown as above to the combination of Prokoph and

Dessloch for the purpose of being able to further search for relevant documents.

18.   Claims 18-19, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further in view of U.S. Patent 6169986 by Bowman et. al. (hereafter Bowman) and U.S. Patent 7254580 by Gharachorloo et. al. (hereafter Gharachorloo).

<u>Claim 18:</u>

The combination of Prokoph and Bowman do not explicitly disclose "wherein a document associated with a query comprises the document selected by said user."

On the other hand, Gharachorloo discloses a document search system comprising index of documents (col. 2 lines 14-16). Gharachorloo further discloses that the user selects a document for viewing (col. 5 line 23-24). Accordingly, wherein a document associated with a query (document search) comprises the document selected by said user (user selects a document for viewing).

Prokoph, Bowman, and Gharachorloo are all directed towards search systems. Prokoph, Bowman, and Gharachorloo are therefore within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied the disclosure of Gharachorloo to the combination of Prokoph and Bowman for the purpose of allowing the user to obtain a the most relevant of documents.

Claim 19:

The combination of Prokoph and Bowman do not explicitly disclose "wherein a document

associated with a query comprises the document browsed to by said user as a result of a query."

On the other hand, Gharachorloo discloses a document search system comprising index of

documents (col. 2 lines 14-16). Col. 4 lines 35-40, search queries submitted by users.

Gharachorloo further discloses that the user selects a document for viewing (col. 5 line 23-24).

Accordingly, wherein a document associated with a query (document search) comprises the

document browsed to by said user (document for viewing) as a result of a query (search queries).

Prokoph, Bowman, and Gharachorloo are all directed towards search systems. Prokoph,

Bowman, and Gharachorloo are therefore within the same field of endeavor. It would have been

obvious to a person of an ordinary skill in the art at the time the invention was made to have

applied the disclosure of Gharachorloo to the combination of Prokoph and Bowman for the

purpose of allowing the user to obtain a the most relevant of documents.

Claim 33:

The combination of Prokoph and Bowman do not explicitly disclose "wherein a document

associated with a query comprises the document selected by said user."

On the other hand, Gharachorloo discloses a document search system comprising index of

documents (col. 2 lines 14-16). Gharachorloo further discloses that the user selects a document

for viewing (col. 5 line 23-24). Accordingly, wherein a document associated with a query

(document search) comprises the document selected by said user (user selects a document for

viewing).

Prokoph, Bowman, and Gharachorloo are all directed towards search systems. Prokoph,

Bowman, and Gharachorloo are therefore within the same field of endeavor. It would have been

obvious to a person of an ordinary skill in the art at the time the invention was made to have

applied the disclosure of Gharachorloo to the combination of Prokoph and Bowman for the

purpose of allowing the user to obtain a the most relevant of documents.

Claim 34:

The combination of Prokoph and Bowman do not explicitly disclose "wherein a document

associated with a query comprises the document browsed to by said user as a result of a query."

On the other hand, Gharachorloo discloses a document search system comprising index of

documents (col. 2 lines 14-16). Col. 4 lines 35-40, search queries submitted by users.

Gharachorloo further discloses that the user selects a document for viewing (col. 5 line 23-24).

Accordingly, wherein a document associated with a query (document search) comprises the

document browsed to by said user (document for viewing) as a result of a query (search queries).

Prokoph, Bowman, and Gharachorloo are all directed towards search systems. Prokoph,

Bowman, and Gharachorloo are therefore within the same field of endeavor. It would have been

obvious to a person of an ordinary skill in the art at the time the invention was made to have

applied the disclosure of Gharachorloo to the combination of Prokoph and Bowman for the

purpose of allowing the user to obtain a the most relevant of documents.

19.   Claims 21 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further

in view of U.S. Patent 6169986 by Bowman et. al. (hereafter Bowman) and U.S. Patent

Application Publicaiton 20030149687 by Brown et. al. (hereafter Brown).

Claim 21:

The combination of Prokoph and Bowman do not explicitly disclose "wherein said user queries

are in a language other than the language of a selected document."

On the other hand, Brown discloses that keyword search in one of a number of languages and

provide a listing of documents contained in all of those languages. Further disclosing the search

engine containing the table can identify pertinent documents either in a selected language, a

second language or in all supported languages, as determined by user. Accordingly, wherein

said user queries are in a language (keyword search in one of a number of languages) are in a

language other than the language of a selected document (identify a document either in a selected

language, a second language or in all supported languages).

Prokoph, Bowman, and Brown are all directed towards search systems utilizing indexes. They

are therefore within the same field of endeavor. It would have been obvious to a person of an

ordinary skill in the art to have applied Brown's disclosure above to the combination of Prokoph

and Bowman for the purpose of further searching relevant documents of different languages.

Thereby extending the search to be able to obtain more relevant search results in different

languages.

Claim 36:

The combination of Prokoph and Bowman do not explicitly disclose "wherein said user queries

are in a language other than the language of a selected document."

On the other hand, Brown discloses that keyword search in one of a number of languages and

provide a listing of documents contained in all of those languages. Further disclosing the search

engine containing the table can identify pertinent documents either in a selected language, a

second language or in all supported languages, as determined by user. Accordingly, wherein

said user queries are in a language (keyword search in one of a number of languages) are in a

language other than the language of a selected document (identify a document either in a selected

language, a second language or in all supported languages).

Prokoph, Bowman, and Brown are all directed towards search systems utilizing indexes. They

are therefore within the same field of endeavor. It would have been obvious to a person of an

ordinary skill in the art to have applied Brown's disclosure above to the combination of Prokoph

and Bowman for the purpose of further searching relevant documents of different languages.

Thereby extending the search to be able to obtain more relevant search results in different

languages.

20.   **Claim 43 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

U.S. Patent Application Publication 2002/0091671 by Prokoph (hereafter Prokoph) further

in view of U.S. Patent 6338056 by Dessloch et. al. (hereafter Dessloch) and U.S. Patent

6169986 by Bowman et. al. (hereafter Bowman).

<u>Claim 43:</u>

The combination of Prokoph and Dessloch disclose in Prokoph "wherein said ranking comprises

ranking said queries according to time of usage."

On the other hand, Bowman discloses a hybrid approach can alternatively be used in which the

table is generated from a large number of log files, but in which the most recent log files are

given greater weight. For example, queries submitted during the last week can be counted three

times when generating the correlation scores, while queries submitted from one week to one

month ago can be counted only once. Accordingly, wherein said ranking (score) comprises

ranking (weight) said queries according to time of usage (most recent log files are given greater

weight).

Prokoph, Dessloch, and Bowman are directed to search systems and thus within the same field of

endeavor. It would have been obvious to a person of an ordinary skill at the time the invention

was made to have applied Bowman's disclosure above to the combination of Prokoph and

Dessloch in order to give more weight to terms that are of recent values thereby showing the

current trends and staying up-to-date.

Claim 53:

The combination of Prokoph and Dessloch disclose in Prokoph "wherein said ranking comprises

ranking said queries according to time of usage."

On the other hand, Bowman discloses a hybrid approach can alternatively be used in which the

table is generated from a large number of log files, but in which the most recent log files are

given greater weight. For example, queries submitted during the last week can be counted three

times when generating the correlation scores, while queries submitted from one week to one

month ago can be counted only once. Accordingly, wherein said ranking (score) comprises

ranking (weight) said queries according to time of usage (most recent log files are given greater

weight).

Prokoph, Dessloch, and Bowman are directed to search systems and thus within the same field of

endeavor. It would have been obvious to a person of an ordinary skill at the time the invention

was made to have applied Bowman's disclosure above to the combination of Prokoph and

Dessloch in order to give more weight to terms that are of recent values thereby showing the

current trends and staying up-to-date.

Conclusion

21.   The prior art made of record listed on PTO-892 and not relied, if any, upon is considered

pertinent to applicant's disclosure.

Contact Information

22.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael D. Pham whose telephone number is (571)272-3924.

The examiner can normally be reached on Monday - Friday 9am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/M. D. P./   John R. Cottingham
Michael D. Pham   Art Unit 2167
Art Unit 2167   Supervisor
Examiner

/John R. Cottingham/
Supervisory Patent Examiner, Art Unit 2167